

I claim:

5 1. A formulation for controlling a lice infestation in a human comprising as an active ingredient a spinosyn, or a physiologically acceptable derivative or salt thereof, and a physiologically acceptable carrier.

10 2. A formulation of Claim 1 that is a hair care formulation.

15 3. A pediculicidal shampoo comprising:  
(a) from about 0.1% to about 30% of a spinosyn, or a physiologically acceptable derivative or salt thereof;

(b) from about 5% to about 30% of a synthetic surfactant;

(c) from about 1% to about 7% of an amide;  
and

(d) water.

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4. A shampoo of Claim 3 wherein the synthetic surfactant is anionic, amphoteric, cationic, zwitterionic, or non-ionic, or a mixture thereof.

5. A shampoo of Claim 4 wherein the amide is coconut monoethanolamide, coconut diethanolamide or a mixture thereof.

6. A shampoo of Claim 4 additionally comprising from about 1% to about 10% of a non-volatile silicone material.

7. A shampoo of Claim 6 wherein the non-volatile silicone is a polyalkyl siloxane, polyalkylaryl siloxane, polyether siloxane co-polymer, or a mixture thereof, whose viscosity is from about 100 centipoise to about 150,000,000 centipoise at 25°.

8. A shampoo of Claim 7 additionally comprising from about 0.5% to about 5% of a suspending agent selected from the group consisting of crystalline amphiphilic materials having needle-like or platelet structures,

polymeric materials, clays, fumed metal oxides, and mixtures thereof.

5 9. A shampoo of Claim 8 wherein the suspending agent is a crystalline amphiphilic material selected from the group consisting of long chain C<sub>16</sub>-C<sub>22</sub> acyl derivatives, long chain C<sub>16</sub>-C<sub>22</sub> alkanolamides of fatty acids, and mixtures thereof.

10 10. A shampoo of Claim 9 wherein the suspending agent is an ethylene glycol diester.

15 11. A shampoo of Claim 4 wherein the amount of a spinosyn, or derivative or salt thereof, is at a level from about 0.25% to about 1.5%.

20 12. A method for controlling a lice infestation in a human comprising topically administering a formulation of Claim 1 to the human.

13. The method of Claim 12 wherein the lice infestation is *Pediculus humanus capitis*.

14. The method of Claim 12 wherein the lice infestation is *Pediculus humanus humanus*.

5 15. The method of Claim 12 wherein the lice infestation is *Pthirus pubis*.

16. A method for treating human hair to kill and facilitate removal of lice and their eggs comprising the steps of:

(a) applying from about 10 g to about 30 g of a formulation comprising a spinosyn, or a physiologically acceptable derivative or salt thereof, and a physiologically acceptable carrier to wet hair;

(b) working the formulation through the hair and scalp;

(c) leaving the formulation on the hair and scalp for about 6-10 minutes;

(d) removing the formulation from the hair by rinsing, with water.

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